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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,680	02/20/2004	Yoshitaka Asou	52469-0100	6994
21611 7590 06/08/2007 SNELL & WILMER LLP (OC) 600 ANTON BOULEVARD SUITE 1400 COSTA MESA, CA 92626			EXAMINER ZHENG, LOIS L	
			ART UNIT 1742	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/783,680	Applicant(s) ASOU ET AL.	
	Examiner Lois Zheng	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1-3 are amended and new claims 4-7 are added in view of applicant's amendment filed 19 March 2007. Claim 7 is amended in view of applicant's supplemental amendment filed 28 March 2007. Therefore, claims 1-7 are currently under examination.

Abstract

2. Applicant's amendment to abstract filed 19 March 2007 is entered and recorded.

Specification

3. Applicant's amendment to specification filed 19 March 2007 is entered and recorded. Accordingly, the objection to the drawing as set forth in the previous Non-Final Office Action mailed 28 December 2006 is withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al. US 6,719,852 B2(Oshima), in view of WO 02/07902(WO'902) and further in view of Hartley et al. US 4,243,434(Hartley).

An official English translation of WO'902 was forwarded to the applicant with the previous Non-Final Office Action mailed 28 December 2006. The examiner relies on the English translation for establishing the rejection ground.

Oshima teaches a method for applying a trivalent Cr containing coating solution to zinc plated metal surfaces to improve the corrosion resistance, wherein the coating solution is free of hexavalent Cr (abstract, col. 2 lines 34-44). Oshima further teaches the zinc plated metal surface is subjected to activation with dilute nitric acid followed by rinsing (col. 9 lines 51-54). The activated zinc plated surface is then treated with a trivalent Cr containing coating solution comprising Cr(III) salt (i.e. inorganic salt), organic acid such as oxalic acid, dicarboxylic acid, and silica (col. 3 line 66 – col. 5 line 61). The coated surface is then rinsed and dried (col. 9 lines 51-54).

However, Oshima does not explicitly teach the formation of black coating, the presence of iron in the conversion coating layer and the claimed finish treatment.

WO'902 teaches a Cr(VI)-free Cr(III) containing coating solution applied to zinc plated metal surfaces, wherein the Cr(III) containing coating solution comprises, Cr(III) salt, organic acid and silica (page 6, 2nd paragraph; page 7, 1st paragraph; page 8, 4th paragraph of the translation), which is very similar to the Cr(III) of Oshima. WO'902 further teaches that iron can be added to the coating solution in order to achieve and improve the uniformity of a black color finish (page 8, 3rd paragraph of the translation).

Therefore, it would have been obvious to one of ordinary skill in the art to have added iron as taught by WO'902 into the Cr(III) coating solution of Oshima in order to achieve a uniform black color coating finish as taught by WO'902.

The application of Cr(III) and iron containing coating solution of Oshima in view of WO'902 reads on the claimed step of forming a black coating.

Hartley teaches coating of metal working tools with a chromium containing coating solution(abstract). Hartley further teaches that multiple coating applications can be carried out when thicker coating is desired(col. 2 lines 29-33). Based on the thickness produced by Hartley's single coating layer(0.0001 or 0.0002 inch) and final desired thicker coating layer(0.001 inch), the coating treatment have to be repeated for at least five times to reach the desired coating thickness.

Therefore, one of ordinary skill in the art would have found it obvious, in light of the teachings of Hartley, to have repeated the coating and rinsing steps at least one or more times in the process of Oshima in view of WO'902 in order to achieve the desired coating thickness.

Regarding claims 1 and 4-6, since the coating solution of Oshima in view of WO'902 and Hartley comprises Cr(III) salt and iron as recited in the claimed black coating forming step and additionally organic acid and silica as recited in the claimed finish treatment step, the examiner concludes that repeating the conversion coating step once (i.e. total of two treatment cycles) as taught by Oshima in view of WO'902 and Hartley meets the limitations of the claimed black chromate treatment step and the finishing treatment step.

Regarding claim 2, for the same reasons as stated above, the examiner concludes that repeating the conversion coating step twice(i.e. total of three treatment cycles) as taught by Oshima in view of WO'902 and Hartley meets the limitations of the

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claimed first and second black chromate treatment steps and the claimed finishing treatment step. In addition, one of ordinary skill in the art would have expected that the coating solution used in the finishing coating step to be less concentrated than the first black chromate coating step since the components in the coating solution would have been partially consumed by the previous two black chromate coating steps.

Regarding claims 3 and 7, Oshima further teaches that the coating solution comprises cobalt(col. 4 lines 33-45). For the same reasons as stated above, the examiner concludes that repeating the conversion coating step two more times in addition to what is recited in claim 2(i.e. total of five treatment cycles) as taught by Oshima in view of WO'902 and Hartley meets the additional limitations of the two step finishing treatment step as claimed.

Response to Arguments

3. Applicant's arguments filed 19 March 2007 have been fully considered but they are not persuasive.

In the remarks, applicant argues that WO'902's chromate layer is not black and the black coating is a result of adding black pigment.

The examiner does not find applicant's argument persuasive since WO'902 clearly teaches that black pigments in the second coating solution is optional(page 5, 2nd paragraph; page 9, 1st paragraph, example 3). Examples 4-6 of WO'902 further shows that a uniform black color coating is formed after the application of Cr(III) conversion coating solution and prior to the application of the second coating solution. Additionally, WO'902 clearly teaches the addition of iron to the Cr(III) solution to

improve the uniformity of the black color(page 8, 3rd paragraph). Therefore, the examiner maintains that WO'902's Cr(III) solution is capable of producing a black coating without the addition of black pigment as alleged by the applicant.

Applicant further argues that Hartley's disclosure is directed toward solid lubricants for metal working and is silent regarding a black chromate coating.

The examiner does not find applicant's argument persuasive since Hartley teaches that the solid lubricants can be dispersed in a chromium containing aqueous coating solution(col. 1 lines 32-43). In addition, the main teaching of Hartley the examiner is relying on is the teaching of applying the coating solution multiple times in order to achieve the designed coating thickness, which is applicable to all coating processes include the coating process of Oshima in view of WO'902. The examiner is not relying on Hartley for teaching a black chromate coating.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

ROY KING 
SUPERVISORY PATENT EXAMINER
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